

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
28 July 2005 (28.07.2005)

PCT

(10) International Publication Number  
WO 2005/069664 A1

(51) International Patent Classification:  
H04B 17/00, G01R 29/08

H04Q 7/34,

(74) Agent: YOU ME PATENT & LAW FIRM; Seolim Bldg.,  
649-10, Yoksam-dong, Kangnam-ku, Seoul 135-080 (KR).

(21) International Application Number:  
PCT/KR2005/000129

(22) International Filing Date: 14 January 2005 (14.01.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
10-2004-0003214 16 January 2004 (16.01.2004) KR

(71) Applicant (for all designated States except US): KT-  
FREETEL CO., LTD. [KR/KR]; 890-20, Dacchi-dong,  
Gangnam-gu, Seoul 135-280 (KR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): SONG, Jae-Sub  
[KR/KR]; 16-1104 Asiaseonsuchon apt., Jamsil 7-dong,  
Songpa-gu, Seoul 138-797 (KR). CHOI, Jin-Ho  
[KR/KR]; 306-704 Jugong apt., 406 Cheonghak-ri,  
Byeolnae-myeon, Namyangju-city, Gyeonggi-do 472-811  
(KR). KIM, Jae-Kon [KR/KR]; 27-310 Jangmi apt., 11  
Sincheon-dong, Songpa-gu, Seoul 138-240 (KR). LEE,  
Jung-Ho [KR/KR]; 487-7 Amsa-dong, Gangdong-gu,  
Seoul 134-859 (KR).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GH, GI, GM, GR, GU, HT, IL, IN, IS, JP, KE,  
KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG,  
MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH,  
PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,  
TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

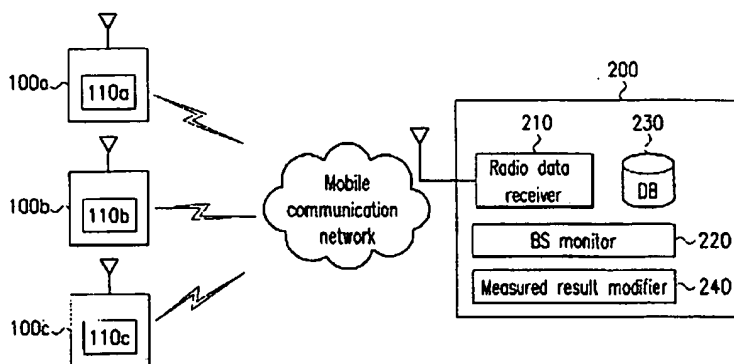
(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SI, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,  
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,  
GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: DEVICE AND METHOD FOR REMOTELY MEASURING AND MONITORING ANTENNA SYSTEM USING MO-  
BILE TERMINAL



(57) Abstract: An antenna system  
measurer (110a, 110b, 110c) for  
a repeater and a base station (10)  
measures powers of a progressive  
wave and a reflected wave of  
a transmit/receive antenna, and  
transmits measured results to  
a monitoring server (200) in a  
radio data format such as an SMS  
message. The monitoring server  
(200) receives the radio data,  
identifies a repeater and a base  
station from sender information  
of the radio data, and calculates  
a VSWR based on the measured  
values. The VSWR is modified  
based on characteristics of the base

station such as length and substance of feeders from a base station identifier corresponding to the sender information. According  
to the present invention, the remote antenna system is monitored in real-time without visits or installation fees, and a plurality of  
repeaters and base stations is managed in a combined manner.

WO 2005/069664 A1